



IPW

501.43144X00

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Toshihiko MURAKAMI

Serial No.: 10/663,732

Filed: September 17, 2003

For: DATA TRANSFER METHOD

**RENEWED REQUEST FOR RECONSIDERATION OF PETITION TO MAKE  
SPECIAL UNDER 37 CFR 1.102(d) and MPEP §708.02, VIII**

**MS Petition**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

April 11, 2005

Sir:

**1. Petition**

Applicants hereby renews its Petition to make this application **Special** previously submitted on December 7, 2004, in accordance with 37 CFR §1.102(d) and MPEP 708.02, VIII. The December 7, 2004 Petition was denied by a Decision issued on March 14, 2005 in which the Petitions Examiner stated that the December 7, 2004 Petition failed to recite distinct features of the claimed subject matter. The present Request for Reconsideration of Petition incorporates by reference the December 7, 2004 Petition and provides additional details regarding the claims and how the claimed subject matter is patentable over the references. The present invention is a new application filed in the United States Patent and Trademark Office on September 17, 2003 and as such has not received any examination by the Examiner

**2. Claims**



Applicants hereby represent that all the claims in the present application are directed to a single invention. If upon examination it is determined that all the claims presented are not directed to a single invention, Applicants will make an election without traverse as a prerequisite to the granting of special status.

**3. Search**

Applicants hereby submit that a pre-examination search has been made by a professional searcher.

The field of search covered:

Class Subclasses

711 114, 162, 202

The above subclasses represent areas deemed to contain subject matter of interest to one or more of the search features. Additionally, a computer database search was conducted on the USPTO systems EAST and WEST; a keyword search was conducted in Class 710, subclasses 1, 5, 8 and 72; and Class 711, subclasses 111, 112, 113, 151, 163 and 206; as well as database searching for foreign patents and non-patent literature. Examiner Jack Lane in Class 711 (Art Unit 2188) was consulted in confirming the field of search.

**4. Copy of References**

A listing of all references found by the professional searcher is provided by a Form PTO-1449 and copies of the references and the Form PTO-1449 were submitted as part of an Information Disclosure Statement (IDS) filed on December 7,

2004. A copy of said December 7, 2004 Information Disclosure Statement is attached.

### **5. Detailed Discussion of the References and Distinctions Between the References and the Claims**

Below is a discussion of the references uncovered by the search and cited in the IDS filed on December 7, 2004 that appear to be most closely related to the subject matter encompassed by the claims of the present application, and which discussion particularly points out how Applicants' claimed subject matter is distinguishable over those references. All other references uncovered by the search and cited in the IDS filed on December 7, 2004 (copy attached) are **not** treated in detail herein.

#### **a. Detailed Discussion of the References**

Honda et al (U.S. Patent Publication Application No. 2004/0103261) shows a system and method of controlling data transfer between a host system and a plurality of storage devices. The computer system has a plurality of host computers 1, a plurality of storage devices 3, a virtualization controller 2 that is connected with the host computers 1 and storage devices 3, and a managing unit 4. The host computers 1, storage devices 3 and the managing unit 4 are connected with the virtualization controller 2 via a network 5, while the managing unit (4) is connected with the virtualization controller 2 via a network 6. The virtualization controller (2) controls data transfer between the storage devices (3) and the host computers (1) in way that the host computers (1) can identify the destination volume (a volume to which data is transferred) using the same identification information that it used to identify the

source volume (a volume from which data is transferred). Further, when the virtualization controller (2) is replaced or a new virtualization controller is installed, the new virtualization controller controls the frame sending process in a way that the host computer (1) can access the same volume even after the replacement or installation using the same identification information that it used to identify the volume to be accessed, before the replacement or installation. See Figs. 1, 3-11 and paragraphs [0008]-[0012], [0044]-[0048].

Fujiwara et al (U.S. Patent No. 6,557,073) shows a storage apparatus including a virtual tape apparatus 3 connected to a host computer, and a tape library apparatus 2. The virtual tape apparatus 3 includes a control section 40 which controls cache memory 36, virtual tape information database 61, virtual storage area space map 62, real tape information database 63 and virtual storage area 50 for storing a virtual tape volume. A data control program 41 is provided in the control section 40 for controlling the data transfer between the host computer 1 and the virtual storage area 50. The data control program 41 forms groups of virtual tape volumes having identical attributes. See Figs. 2-6, col. 2, lines 20-40 and col. 4, line 46 to col. 6, line 49 and summary.

Fujimoto et al (U.S. Patent Publication Application No. 2004/0103244) shows a system and managing method for cluster-type storage configured so as to expand from small to large configurations at a remarkable cost. The cluster-type storage includes a plurality of protocol transformation units 10 that interface to the servers 3 and disks 2, a plurality of data caching control units 21 and a plurality of management units (60) that generate a management table 651 in which virtual volume (2) (VVOL 2#) of column (632) are assigned, on the basis of the tables 652-

654 in all the control clusters (71). A copy of the portion related to each control cluster (71) is transferred from the table to the target data caching control unit (21). See Figs. 1, 4, 5 and 16-18 abstract and paragraphs [0021]-[0022].

Rajan et al (U.S. Patent Publication No. 2004/0030822) shows a storage virtualization selection technique that automates a virtualization selection process including layering virtual disk objects on a volume of a file system of a multi-protocol storage appliance 100. The appliance includes a processor 122, memory 124, network adaptors 125, 126, and a storage adaptor 128. A storage operating system 200 also included in the appliance provides the virtualization system to logically organize the information as a hierarchical structure. Thus, the system disclosed organize storage of the file system within volumes created among the managed disks, and creates the virtual disk as a storage object within one of the volumes. See Figs. 2, 3 and 6 and paragraphs [0021]-[0025].

**b. Distinctions Between the References and the Claims**

The present invention as recited in the claims is not taught or suggested by any of the above noted references whether taken individually or in combination with each other or in combination with any of the other references now of record.

The present invention as recited in the claims is directed to a data transfer method, computer system and relay device wherein the computer system includes a plurality of computers, a plurality of memory devices, wherein the relay device connects the computers and the memory devices, and a management device which manages the computers, the memory devices and the relay device.

According to a first feature of the present invention, the management device

sets virtual memory areas of the memory device for the computers and holds information on contents of the setting as first information.

Further, according to a second feature of the present invention the relay device holds second information which is created based upon the first information. The virtual memory areas correspond to the memory areas in the respective memory devices or a memory area formed by combining memory areas in the memory devices.

Still further, according to a third feature of the present invention the relay device selects one virtual memory area from the second information and when the selected virtual memory area is a memory area formed by combining the memory areas in the memory devices as an opportunity, performs data transfer among the memory devices.

The above described first, second and third features of the present invention as recited in the claims are not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, for example, the above described first, second and third features of the present invention as recited in the claims are not taught or suggested by Honda. Honda teaches a system and method of controlling data transfer between a host system and a plurality of storage devices. As taught by Honda, a virtualization controller is connected between the host computers and the storage devices and a managing unit such that the virtualization controller controls data transfer process in a way such that the host computer can identify the destination volume using the same identification information that it uses to identify the source volume.

Thus, as is clear from above, the first, second and third features of the present

invention as recited in the claims are not taught or suggested by Honda whether taken individually or in combination with any of the other references of record.

The same deficiencies noted above with respect to Honda are evident in each of the other references described above, namely Fujiwara, Fujimoto and Rajan. Each of the other references described above, namely Fujiwara, Fujimoto and Rajan disclose various virtualization techniques and apparatus. However, at no point in each of Fujiwara, Fujimoto and Rajan is there any teaching or suggestion of the above described first, second and third features of the present invention as recited in the claims. Thus, each of Fujiwara, Fujimoto and Rajan suffer from the same deficiencies with respect to the first, second and third features of the present invention as recited in the claims as Honda.

Therefore, Applicants submit that the features of the present invention as recited in the claims are not taught or suggested by any of the references of record whether taken individually or in combination with each other.

## **6. Conclusion**

Applicant has conducted what it believes to be a reasonable search, but makes no representation that "better" or more relevant prior art does not exist. The United States Patent and Trademark Office is urged to conduct its own complete search of the prior art, and to thoroughly examine this application in view of the prior art cited herein and any other prior art that the United States Patent and Trademark Office may locate in its own independent search. Further, while Applicant has identified in good faith certain portions of each of the references listed herein in order to provide the requisite detailed discussion of how the claimed subject matter is

patentable over the references, the United States Patent and Trademark Office should not limit its review to the identified portions but rather, is urged to review and consider the entirety of each reference, and not to rely solely on the identified portions when examining this application.

In view of the foregoing, Applicant requests that this Petition to Make Special be granted and that the application undergo the accelerated examination procedure set forth in MPEP 708.02 VIII.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (501.43144X00).

Respectfully submitted,

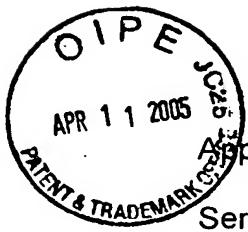
MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.



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**COPY**

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §1.97 & 1.98**

**MS Amendment**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

December 7, 2004

Sir:

In the matter of the above-identified application, applicants are submitting herewith copies of the documents listed in the attached form equivalent to Form PTO-1449 for the Examiner's consideration.

This information disclosure statement is being submitted before the mailing date of a first office action on the merits.

To the extent the documents listed on the attached form equivalent to Form PTO-1449 are not in the English language, the requirement of 37 CFR §1.98(a)(3) for a concise explanation of the relevance is satisfied by an English language version or translation of the U.S. patent office report citing the documents.

It is respectfully requested that this information disclosure statement be considered by the Examiner.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of MATTINGLY, STANGER & MALUR, P.C. Deposit Account No. 50-1417 (501.43144X00) please credit any excess fees to such deposit account.

Respectfully submitted,



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**FORM PTO-1449** U.S. Department of  
Commerce Patent and Trademark Office

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

ATTY. DOCKET NO.

SERIAL NO.

501.43144X00

10/663,732

APPLICANT  
T. MURAKAMIFILING DATE  
September 17, 2003

GROUP



**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER								DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
		R	E	3	6	9	8	9							
	R	5	7	8	7	4	8	7		12/00	White				
	5	6	5	5	7	0	7	3		7/98	Hashimoto et al				
	6	5	6	7	8	8	9			4/03	Fujiwara et al				
	6	5	6	7	8	8	9			5/03	DeKoning et al				
	6	7	1	8	3	7	2			4/04	Bober				
	2	0	0	1	7	7	3	3	0	9/03	Idei et al				
	2	0	0	0	1	8	2	5	0	1	9/03	George et al			
	2	0	0	0	3	2	1	0	6	3	11/03	Eguchi et al			
	2	0	0	0	3	2	1	0	6	3	11/03				

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER								DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT
		3	2	8	8	9	3	4						
		3	2	8	8	9	3	4		12/91	Japan			

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**


EXAMINER   DATE CONSIDERED  

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Form PTO-1449 [6-4])

FORM PTO-1449 U.S. Department of  
Commerce Patent and Trademark Office

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several sheets if necessary)

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	DOCUMENT NUMBER								DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
2 0 0 4	0	0	3	0	8	2	2	2/04	Rajan et al				<b>COPY</b>
2 0 0 4	0	1	0	3	2	4	4	5/04	Fujimoto et al				
2 0 0 4	0	1	0	3	2	6	1	5/04	Honda et al				
2 0 0 4	0	0	6	4	6	3	3	4/04	Oota				
2 0 0 4	0	0	9	8	5	3	7	5/04	Serizawa				

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT
					YES	NO	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Form PTO-1449 [6-4])